long, and the top has a great sagittal crest. The paroccipital processes are short and are closely applied to the inastoid processes. The mesethmoid is larger than in the carnivorous Marsupials, and the frontals are very large. The palate has a peculiar structure ; in most species the hinder ends of the palatines are separated by a narrow fissure which broadens gradually, thus forming the posterior nares. In *H. leptocephalus* the posterior nares are brought very far back by the meeting of the alisphenoids. The pre-s-phenoid, contrary to what we find in the Dog, for example, is chiefly concealed by the vomer, which covers it. The mandible has a long and strong symphysis, and its angle is not inflected. The fore-limb is described as being " weak when compared with the modern Carnivora." The scaphoid and lunar are separate, and there is a eentrale. The teeth present us with nearly the typical formula. There is only one molar missing in the upper jaw. The canines are enlarged. It has been suggested from a consideration of its palate that *Hyaenodon* was a semiaquatic animal; the deep cleaving at the extremities of the phalanges seems to point in the same direction, since they resemble in this the genus *Patrio/elis,* which there are other reasons to regard as aquatic. This latter genus has a fore-limb which is very like that of the Pinnipedia, the digits are much spread out, and would seem to have supported a kind of paddle. In any case it certainly fed upon aquatic tortoises, for their remains have been found in its coprolites. The name *Limnofelis,* also applied to what appear to have been members of this genus, is suggestive of their habits. *Patriofelis,* at least one species, seems to have been of about the size of a Lion.

Mesonyx has a brain case which is actually smaller than that of the Marsupial *FhylacimLs.* The lachrymal bone is very large, and extends a little way over the face, as is also the case with *jETyaenodon;* this condition is also found in Insectivora and in *Thylacinus** The axis vertebra has a curiously-shaped spine, which is very different from the hatchet-shaped process of that vertebra usual in. the Carnivora, but is not unlike what exists

in the Arctoid genera *Meles* and *Mydaus.* The limbs show
. much disparity in length, and seem to argue a much-arched
back when the creature progressed. The carpus is stated to
be strikingly like that of the Insectivora. There is as in
other Ckeodottts a separation between the scaphoid and lunar;